

AMENDMENTS TO THE CLAIMS

1-16. (Cancelled)

17. (Previously Presented) A computer implemented method for screening a subject for disorders of glucose metabolism, comprising steps of:

measuring a glucose concentration profile using a glucose concentration analyzer, said glucose concentration profile comprising a plurality of blood glucose concentrations from at least after a glucose or meal challenge;

generating a screening factor, wherein said screening factor comprises a mathematical representation of at least a plurality of glucose concentrations within said glucose concentration profile, wherein said screening factor is uniquely associated with a state of glucose metabolism disorder, wherein said state of glucose metabolism disorder comprises any of:

diabetic,

pre-diabetic; and

hyperinsulinemic;

classifying the subject into one of said states of glucose metabolism disorder based on evaluation of said screening factor; and

outputting said one of said states of glucose metabolism disorder to a display,

wherein said step of generating a screening factor comprises the step of calculating a weighted average of weighted parameters according to:

$$SF = \frac{(P_1W_1 + P_2W_2 + P_3W_3 + P_4W_4 + P_5W_5 + P_6W_6)}{(W_1 + W_2 + W_3 + W_4 + W_5 + W_6)}$$

wherein SF is said screening factor, P_1 is a first parameter, said first parameter comprising glucose concentration, P_2 is a second parameter, said second parameter

comprising rate at which glucose concentration rises, P_3 is a third parameter, said third parameter comprising maximum monitored glucose concentration; P_4 is a fourth parameter, said fourth parameter comprising duration that glucose remains elevated; P_5 is a fifth parameter, said fifth parameter comprising rate of decrease of glucose concentration after a peak; and P_6 is a sixth parameter, said sixth parameter comprising minimum glucose concentration after a maximum; and wherein W_1 , W_2 , W_3 , W_4 , W_5 , W_6 , are weighting factors, wherein at least two of said weighting factors are non-zero.

18-33. (Cancelled)